Remarks

Claims 62-66 are pending in the subject application. Applicant hereby reaffirms the election of the peptide PALLVV (SEQ ID NO: 44) as the species. By way of this amendment, claim 66 has been amended (support for the amended claim may be found, for example, at Table 1 and pages10-12 and 32-33 of the as-filed application). Accordingly, claims 62-66 are currently before the Examiner and read on the elected invention and elected species. Favorable consideration of the pending claims is respectfully requested.

The subject specification has been objected to for lacking appropriate sequence identifiers. By this Amendment, Applicant has replaced pages 34 and 116 of the specification to add sequence identifier numbers associated with each sequence. The sequence listing is provided on paper and computer readable format. I hereby certify that the paper and computer readable copies contain the same information and that no new material is added by this submission. Accordingly, reconsideration and withdrawal of the objection is respectfully requested.

Applicant respectfully traverses the restriction requiring the species election of a single peptide in this matter. As the Examiner is aware, this application is a national stage application and is subject to the unity of invention rules for restriction. The principles of unity of invention are used to determine the types of claimed subject matter and the combinations of claims to different categories of invention that are permitted to be included in a single international or national stage patent application. The basic principle is that an application should relate to only one invention or, if there is more than one invention, that applicant would have a right to include in a single application only those inventions which are so linked as to form a single general inventive concept. The expression "special technical features" is defined in PCT Rule 13.2 as meaning those technical features that define a contribution which each of the inventions, considered as a whole, makes over the prior art. Additionally, a group of inventions is considered linked to form a single general inventive concept where there is a technical relationship among the inventions that involves at least one common or corresponding special technical feature.

In an effort to support a finding that the claimed invention lacks unity, the Office Action cites to Hunig *et al.* (U.S. Patent Application Publication Number 2003/0166860 Al). Specifically, the Office Action argues:

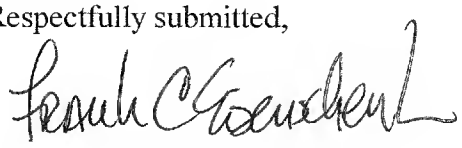
> In response, the cited prior art document of Hunig et al. (US-2003/0166860) teaches superagonistic antibodies to CD28, CTLA4, ICOS and PD-1 (see entire document, in particular e.g. claim 8 in conjunction with claim 3). Therefore, the Species as set forth in the previous Office Action are deemed to have no special technical feature that defines the contribution over the prior art of Hunig et al. since the Species of Applicant's invention do not contribute a special technical feature when viewed over the prior art, they do not have a single general inventive concept and so lack unity of invention under PCT Rule 13.2.

Applicant respectfully submits that this publication does not support a finding that the claimed invention fails to define a contribution over the prior art. For example, the combination of claims 8 and 3 in the Hunig *et al.* publication do not give rise to antibodies such as those claimed herein. Notably, the combination of claims 8 and 3 would give rise to antibodies that bind to only the C'-D loop (see last four lines of claim 8). Applicant further notes that Hunig *et al.* is directed to providing antigens that contain the C'-D loop of CD28 molecules but are not human PD-1 (see the last line of claim 3). Indeed, paragraph 28 of Hunig *et al.* states "the essential element of a protein or peptide according to the invention is the C'-D structure". Paragraph 28 also states "[a]ccording to the invention, it is surprising that all found superagonistic CD28-specific mAbs bind to the C'-D loop, whereas the not superagonistic CD28-specific mAbs do not bind thereto". Thus, Hunig *et al.* indicate that superagonistic antibodies are generated against the C'-D loop and that antibodies that only bind to this structure are capable of superagonistic function. In contrast, the claims of this application are directed to superagonistic antibodies that bind to PD-1 and which do not bind only to the C'-D loop of CD28 (see also Figure 2 indicating SEQ ID NO: 44 is located in the A portion of human PD-1). As noted in Hunig *et al.*, such antibodies would not be expected to have superagonistic activity since only antibodies that bound to the C'-D loop of CD28 had superagonistic activity.

Applicant believes that the pending claims are in condition for allowance and such action is respectfully requested.

The Commissioner is hereby authorized to charge any fees under 37 CFR §§1.16 or 1.17 as required by this paper to Deposit Account No. 19-0065.

Respectfully submitted,



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FCE/jb
Attachments: Replacement pages 34 and 116 of the specification
Sequence Listing (pages 1-25)